

SEQUENCE LISTING

<110> Luche, Ralf M.
Wei, Bo

<120> DSP-11 DUAL SPECIFICITY PHOSPHATASE

<130> 200125.418C1

<140> US

<141> 2003-09-04

<160> 22

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 707

<212> DNA

<213> Homo sapiens

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ctgttggaac tgggcgtgcg gcacctgggt tccctgacgg agcgcggggc cctccacagc      180
gacagctgcc ccggcctcac cctgcaccgc ctgcgcctcc ccgacttctg cccgccggcc      240
cccgaccaga tcgaccgctt cgtgcagatc gtggacgagg ccaacgcacg gggagaggct      300
gtggagtgct actgtgctct gggctttggc cgcactggca ccatgctggc ctgttacctg      360
gtgaaggagc ggggcttggc tgcaggagat gccattgctg aatccgacg actacgaccc      420
ggctccatcg agacctatga gcaggagaaa gcagttcttc agttctacca gcgaacgaaa      480
taaggggcct tagtaccctt ctaccaggcc ctactccccc ttcccattgt tgtcgatggg      540
gccagagatg aagggaagtg gactaaagta ttaaacccctc tagctcccat tggctgaaga      600
cactgaagta gccaccacct gcaggcaggt cctgattgaa ggggaggctt gtactgcttt      660
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<210> 2

<211> 150

<212> PRT

<213> Homo sapiens

<400> 2

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Met Gly Val Gln Pro Asn Phe Ser Trp Val Leu Pro Gly Arg Leu
 1              5              10              15
Ala Gly Leu Ala Leu Pro Arg Leu Pro Ala His Tyr Gln Phe Leu Leu
      20              25              30
Asp Leu Gly Val Arg His Leu Val Ser Leu Thr Glu Arg Gly Pro Pro
      35              40              45
His Ser Asp Ser Cys Pro Gly Leu Thr Leu His Arg Leu Arg Ile Pro
      50              55              60
Asp Phe Cys Pro Pro Ala Pro Asp Gln Ile Asp Arg Phe Val Gln Ile
65              70              75              80

```

Val Asp Glu Ala Asn Ala Arg Gly Glu Ala Val Gly Val His Cys Ala
 85 90 95
 Leu Gly Phe Gly Arg Thr Gly Thr Met Leu Ala Cys Tyr Leu Val Lys
 100 105 110
 Glu Arg Gly Leu Ala Ala Gly Asp Ala Ile Ala Glu Ile Arg Arg Leu
 115 120 125
 Arg Pro Gly Ser Ile Glu Thr Tyr Glu Gln Glu Lys Ala Val Phe Gln
 130 135 140
 Phe Tyr Gln Arg Thr Lys
 145 150

<210> 3
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 3
 Val Gly Val His Cys Ala Leu Gly Phe Gly Arg Thr Gly Thr Met Leu
 1 5 10 15
 Ala Cys Tyr Leu Val
 20

<210> 4
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 4
 Asn Gly Arg Val Leu Val His Cys Gln Ala Gly Ile Ser Arg Ser Gly
 1 5 10 15
 Thr Asn Ile Leu Ala Tyr Leu Met
 20

<210> 5
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 5
 cgggctcgtag tcgtcgggatt tcagcaa

27

<210> 6
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 6
 cctctccccg tcggttgccc tcgt

24

<210> 7
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 7
 cgcacgggga gaggtgt 18

<210> 8
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 8
 gaggaataat aaatgaccg ctgtcctgtg ccccttccca g 41

<210> 9
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 9
 ttctgttcgc tggtagaact ggaagactgc ttct 34

<210> 10
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 10
 atgggcgtgc aaccccccaa ctctcc 27

<210> 11
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 11

tcattttgtt cgctggtaga actggaagac ggcc

34

<210> 12
 <211> 453
 <212> DNA
 <213> Mus musculus

<400> 12
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 tccttgacgg agcgcggacc ccctcacagt gacagctgtc ccggcctcac gctgcaccga 180
 atgcgcatcc ctgacttttg ccgcgcgtcc cgggaacaga tcgaccaatt tgtgaagatc 240
 gtggacgagg ccaatgcccg gggagaggct gttggagtg cactgtgccct aggcctttggc 300
 cgcactggca ccatgctagc ctgctacttg gtgaaggagc gggctttggc gccaggagat 360
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<210> 13
 <211> 150
 <212> PRT
 <213> Mus musculus

<400> 13
 Met Gly Val Gln Pro Asn Phe Ser Trp Val Leu Pro Gly Arg Leu
 1 5 10 15
 Ala Gly Leu Ala Leu Pro Arg Leu Pro Ala His Tyr Gln Phe Leu Leu
 20 25 30
 Asp Gln Gly Val Arg His Leu Val Ser Leu Thr Glu Arg Gly Pro Pro
 35 40 45
 His Ser Asp Ser Cys Pro Gly Leu Thr Leu His Arg Met Arg Ile Pro
 50 55 60
 Asp Phe Cys Pro Pro Ser Pro Glu Gln Ile Asp Gln Phe Val Lys Ile
 65 70 75 80
 Val Asp Glu Ala Asn Ala Arg Gly Glu Ala Val Gly Val His Cys Ala
 85 90 95
 Leu Gly Phe Gly Arg Thr Gly Thr Met Leu Ala Cys Tyr Leu Val Lys
 100 105 110
 Glu Arg Ala Leu Ala Pro Gly Asp Ala Ile Ala Glu Ile Arg Arg Leu
 115 120 125
 Arg Pro Gly Ser Ile Glu Thr Tyr Glu Gln Glu Lys Ala Val Phe Gln
 130 135 140
 Phe Tyr Gln Arg Thr Lys
 145 150

<210> 14
 <211> 170
 <212> PRT
 <213> Homo sapiens

<400> 14
 Ser Asp Leu Asp Arg Asp Pro Asn Ser Ala Thr Asp Ser Asp Gly Ser
 1 5 10 15
 Pro Leu Ser Asn Ser Gln Pro Ser Phe Pro Val Glu Ile Leu Pro Phe
 20 25 30

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Leu Tyr Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Glu
   35           40           45
Glu Phe Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn
   50           55           60
Leu Phe Glu Asn Ala Gly Glu Phe Lys Tyr Lys Gln Ile Pro Ile Ser
   65           70           75           80
Asp His Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser
   85           90           95
Phe Ile Asp Glu Ala Arg Gly Lys Asn Cys Gly Val Leu Val His Cys
   100          105          110
Leu Ala Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met
   115          120          125
Gln Lys Leu Asn Leu Ser Met Asn Asp Ala Tyr Asp Ile Val Lys Met
   130          135          140
Lys Lys Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu
   145          150          155          160
Asp Phe Glu Arg Thr Leu Gly Leu Ser Ser
   165          170

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<210> 15
<211> 168
<212> PRT
<213> Homo sapiens

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<400> 15
Asp Arg Glu Leu Pro Ser Ser Ala Thr Glu Ser Asp Gly Ser Pro Val
   1           5           10           15
Pro Ser Ser Gln Pro Ala Phe Pro Val Gln Ile Leu Pro Tyr Leu Tyr
   20           25           30
Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Gly Lys Tyr
   35           40           45
Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn Ala Phe
   50           55           60
Glu His Gly Gly Glu Phe Thr Tyr Lys Gln Ile Pro Ile Ser Asp His
   65           70           75           80
Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser Phe Ile
   85           90           95
Asp Glu Ala Arg Ser Lys Lys Cys Gly Val Leu Val His Cys Leu Ala
   100          105          110
Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met Gln Lys
   115          120          125
Met Asn Leu Ser Leu Asn Asp Ala Tyr Asp Phe Val Lys Arg Lys Lys
   130          135          140
Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu Asp Phe
   145          150          155          160
Glu Arg Thr Leu Gly Leu Ser Ser
   165

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<210> 16
<211> 170
<212> PRT
<213> Homo sapiens

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<400> 16

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Gly Leu Cys Glu Gly Lys Pro Ala Ala Leu Leu Pro Met Ser Leu Ser
 1      5      10      15
Gln Pro Cys Leu Pro Val Pro Ser Val Gly Leu Thr Arg Ile Leu Pro
 20      25      30
His Leu Tyr Leu Gly Ser Gln Lys Asp Val Leu Asn Lys Asp Leu Met
 35      40      45
Thr Gln Asn Gly Ile Ser Tyr Val Leu Asn Ala Ser Asn Ser Cys Pro
 50      55      60
Lys Pro Asp Phe Ile Cys Glu Ser Arg Phe Met Arg Val Pro Ile Asn
 65      70      75      80
Asp Asn Tyr Cys Glu Lys Leu Leu Pro Trp Leu Asp Lys Ser Ile Glu
 85      90      95
Phe Ile Asp Lys Ala Lys Leu Ser Ser Cys Gln Val Ile Val His Cys
100      105      110
Leu Ala Gly Ile Ser Arg Ser Ala Thr Ile Ala Ile Val Tyr Ile Met
115      120      125
Lys Thr Met Gly Met Ser Ser Asp Asp Ala Tyr Arg Phe Val Lys Asp
130      135      140
Arg Arg Pro Ser Ile Ser Pro Asn Phe Asn Phe Leu Gly Gln Leu Leu
145      150      155      160
Glu Tyr Glu Arg Thr Leu Lys Leu Leu Ala
165      170

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<210> 17
<211> 168
<212> PRT
<213> Homo sapiens

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<400> 17
Pro Ala Gln Ala Leu Pro Pro Ala Gly Ala Glu Asn Ser Asn Ser Asp
 1      5      10      15
Pro Arg Val Pro Ile Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20      25      30
Tyr Leu Tyr Leu Gly Ser Cys Asn His Ser Ser Asp Leu Gln Gly Leu
 35      40      45
Gln Ala Cys Gly Ile Thr Ala Val Leu Asn Val Ser Ala Ser Cys Pro
 50      55      60
Asn His Phe Glu Gly Leu Phe His Tyr Lys Ser Ile Pro Val Glu Asp
 65      70      75      80
Asn Gln Met Val Glu Ile Ser Ala Trp Phe Gln Glu Ala Ile Ser Phe
 85      90      95
Ile Asp Ser Val Lys Asn Ser Gly Gly Arg Val Leu Val His Cys Gln
100      105      110
Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Ile Gln
115      120      125
Ser His Arg Val Arg Leu Asp Glu Ala Phe Asp Phe Val Lys Gln Arg
130      135      140
Arg Gly Val Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
145      150      155      160
Leu Glu Thr Gln Val Leu Cys His
165

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```

<210> 18
<211> 169

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<212> PRT

<213> Homo sapiens

<400> 18

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Pro Leu Ser Thr Ser Val Pro Asp Ser Ala Glu Ser Gly Cys Ser Ser
 1          5          10          15
Cys Ser Thr Pro Leu Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
      20          25          30
Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Arg Lys Asp Met Leu
      35          40          45
Asp Ala Leu Gly Ile Thr Ala Leu Ile Asn Val Ser Ala Asn Cys Pro
      50          55          60
Asn His Phe Glu Gly His Tyr Gln Tyr Lys Ser Ile Pro Val Glu Asp
      65          70          75          80
Asn His Lys Ala Asp Ile Ser Ser Trp Phe Asn Glu Ala Ile Asp Phe
      85          90          95
Ile Asp Ser Ile Lys Asn Ala Gly Gly Arg Val Phe Val His Cys Gln
      100          105          110
Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Arg
      115          120          125
Thr Asn Arg Val Lys Leu Asp Glu Ala Phe Glu Phe Val Lys Gln Arg
      130          135          140
Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
      145          150          155          160
Phe Glu Ser Gln Val Leu Ala Pro His
      165

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<210> 19

<211> 169

<212> PRT

<213> Homo sapiens

<400> 19

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Pro Val Pro Pro Ser Ala Thr Glu Pro Leu Asp Leu Gly Cys Ser Ser
 1          5          10          15
Cys Gly Thr Pro Leu His Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
      20          25          30
Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ala Arg Arg Asp Met Leu
      35          40          45
Asp Ala Leu Gly Ile Thr Ala Leu Leu Asn Val Ser Ser Asp Cys Pro
      50          55          60
Asn His Phe Glu Gly His Tyr Gln Tyr Lys Cys Ile Pro Val Glu Asp
      65          70          75          80
Asn His Lys Ala Asp Ile Ser Ser Trp Phe Met Glu Ala Ile Glu Tyr
      85          90          95
Ile Asp Ala Val Lys Asp Cys Arg Gly Arg Val Leu Val His Cys Gln
      100          105          110
Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Met
      115          120          125
Lys Lys Arg Val Arg Leu Glu Glu Ala Phe Glu Phe Val Lys Gln Arg
      130          135          140
Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
      145          150          155          160
Phe Glu Ser Gln Val Leu Ala Thr Ser

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165

<210> 20
 <211> 171
 <212> PRT
 <213> Homo sapiens

<400> 20
 Ser Glu Arg Ala Leu Ile Ser Gln Cys Gly Lys Pro Val Val Asn Val
 1 5 10 15
 Ser Tyr Arg Pro Ala Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20 25 30
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Lys Cys Glu Phe Leu
 35 40 45
 Ala Asn Leu His Ile Thr Ala Leu Leu Asn Val Ser Arg Arg Thr Ser
 50 55 60
 Glu Ala Cys Met Thr His Leu His Tyr Lys Trp Ile Pro Val Glu Asp
 65 70 75 80
 Ser His Thr Ala Asp Ile Ser Ser His Phe Gln Glu Ala Ile Asp Phe
 85 90 95
 Ile Asp Cys Val Arg Glu Lys Gly Gly Lys Val Leu Val His Cys Glu
 100 105 110
 Ala Gly Ile Ser Arg Ser Pro Thr Ile Cys Met Ala Tyr Leu Met Lys
 115 120 125
 Thr Lys Gln Phe Arg Leu Lys Glu Ala Phe Asp Tyr Ile Lys Gln Arg
 130 135 140
 Arg Ser Met Val Ser Pro Asn Phe Gly Phe Met Gly Gln Leu Leu Gln
 145 150 155 160
 Tyr Glu Ser Glu Ile Leu Pro Ser Thr Pro Asn
 165 170

<210> 21
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 21
 Ser Gly Ser Phe Glu Leu Ser Val Gln Asp Leu Asn Asp Leu Leu Ser
 1 5 10 15
 Asp Gly Ser Gly Cys Tyr Ser Leu Pro Ser Gln Pro Cys Asn Glu Val
 20 25 30
 Thr Pro Arg Ile Tyr Val Gly Asn Ala Ser Val Ala Gln Asp Ile Pro
 35 40 45
 Lys Leu Gln Lys Leu Gly Ile Thr His Val Leu Asn Ala Ala Glu Gly
 50 55 60
 Arg Ser Phe Met His Val Asn Thr Asn Ala Asn Phe Tyr Lys Asp Ser
 65 70 75 80
 Gly Ile Thr Tyr Leu Gly Ile Lys Ala Asn Asp Thr Gln Glu Phe Asn
 85 90 95
 Leu Ser Ala Tyr Phe Glu Arg Ala Ala Asp Phe Ile Asp Gln Ala Leu
 100 105 110
 Ala Gln Lys Asn Gly Arg Val Leu Val His Cys Arg Glu Gly Tyr Ser
 115 120 125
 Arg Ser Pro Thr Leu Val Ile Ala Tyr Leu Met Met Arg Gln Lys Met


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      130              135              140
Asp Val Lys Ser Ala Leu Ser Ile Val Arg Gln Asn Arg Glu Ile Gly
145              150              155              160
Pro Asn Asp Gly Phe Leu Ala Gln Leu Cys Gln Leu Asn Asp Arg Leu
      165              170              175
Ala Lys Glu Gly
      180

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<210> 22

<211> 150

<212> PRT

<213> Homo sapiens

<400> 22

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Met Gly Val Gln Pro Pro Asn Phe Ser Trp Val Leu Pro Gly Arg Leu
 1              5              10              15
Ala Gly Leu Ala Leu Pro Arg Leu Pro Ala His Tyr Gln Phe Leu Leu
      20              25              30
Asp Leu Gly Val Arg His Leu Val Ser Leu Thr Glu Arg Gly Pro Pro
      35              40              45
His Ser Asp Ser Cys Pro Gly Leu Thr Leu His Arg Leu Arg Ile Pro
      50              55              60
Asp Phe Cys Pro Pro Ala Pro Asp Gln Ile Asp Arg Phe Val Gln Ile
      65              70              75              80
Val Asp Glu Ala Asn Ala Arg Gly Glu Ala Val Gly Val His Cys Ala
      85              90              95
Leu Gly Phe Gly Arg Thr Gly Thr Met Leu Ala Cys Tyr Leu Val Lys
      100              105              110
Glu Arg Gly Leu Ala Ala Gly Asp Ala Ile Ala Glu Ile Arg Arg Leu
      115              120              125
Arg Pro Gly Ser Ile Glu Thr Tyr Glu Gln Glu Lys Ala Val Phe Gln
      130              135              140
Phe Tyr Gln Arg Thr Lys
      145              150

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